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subtracting, at a subtraction unit, a light amount of a light incident from a neighboring pixel of the normal pixel from a pixel value of the normal pixel using a light amount of a light detected by the detection pixel of the image sensor.

It should be understood by those skilled in the art that various modifications, combinations, sub-combinations and alterations may occur depending on design requirements and other factors insofar as they are within the scope of the appended claims or the equivalents thereof.

What is claimed is:

1. An image sensor comprising:
a color filter including a first color portion and a second color portion;
a plurality of normal pixels;
a detection pixel adjacent to one of the plurality of normal pixel; and
a light shielding member,
wherein the one of the plurality of normal pixel is configured to detect a light incident through the first color portion,
wherein the detection pixel is configured to detect a part of light incident through the first color portion, and
wherein the light shielding member is disposed between the second color portion and the detection pixel.
2. The image sensor according to claim 1, wherein the light shielding member is configured to shield an incident light incident upon the detection pixel from outside.
3. The image sensor according to claim 2, wherein the light shielding member is formed by a wiring layer.
4. The image sensor according to claim 3, wherein the light shielding member is formed by a plurality of wiring layers.
5. The image sensor according to claim 4, wherein each of the wiring layers has a gap formed thereon at different positions from each other.
6. The image sensor according to claim 4, wherein each of the wiring layers is arranged depending on an incident angle of an incident light.
7. The image sensor according to claim 2, wherein the light shielding member is formed by a metal disposed on a photoelectric conversion device.
8. The image sensor according to claim 1, wherein the image sensor includes a plurality of the detection pixels.
9. The image sensor according to claim 8, wherein a result obtained by detecting a light incident by the detection pixel is used to correct a pixel value of a normal pixel.
10. The image sensor according to claim 1, wherein each of the normal pixels includes a photoelectric conversion portion configured to convert an incident light into an electrical signal.
11. An imaging apparatus comprising:
an image sensor which includes
a color filter including a first color portion and a second color portion,
a plurality of normal pixels,
a detection pixel adjacent to one of the plurality of normal pixel, and
a light shielding member; and
a subtraction unit,
wherein the one of the plurality of normal pixel is configured to detect a light incident through the first color portion,
wherein the detection pixel is configured to detect a part of light incident through the first color portion,
wherein the light shielding member is disposed between the second color portion and the detection pixel, and

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wherein the subtraction unit is configured to subtract a light amount of a light detected by the detection pixel from a light amount of a light detected by the one of the plurality of normal pixel.

12. The imaging apparatus according to claim 11, wherein the subtraction unit includes

- a selection unit configured to select a detection pixel to be used in subtracting the light amount,
- a light amount calculation unit configured to calculate the light amount included in a pixel value of a normal pixel to be processed using a pixel value of the detection pixel selected by the selection unit, and
- a light amount subtraction unit configured to subtract the light amount calculated by the light amount calculation unit from a pixel value of a normal pixel to be processed.

13. The imaging apparatus according to claim 12, wherein the selection unit selects a plurality of detection pixels, and

wherein the light amount calculation unit calculates the light amount by adding a weight to each pixel value of the plurality of detection pixels depending on a positional relationship between the plurality of detection pixels selected by the selection unit and a normal pixel to be processed.

14. The imaging apparatus according to claim 12, wherein the light amount calculation unit changes the detection pixel used to calculate the light amount to another detection pixel or prohibits the detection pixel from being used, when a pixel value of a neighboring pixel of the detection pixel selected by the selection unit is saturated.

15. The imaging apparatus according to claim 12, wherein the light amount calculation unit changes the detection pixel used to calculate the light amount to another detection pixel or prohibits the detection pixel from being used, when the detection pixel selected by the selection unit is a defective pixel.

16. The imaging apparatus according to claim 12, wherein the light amount calculation unit further corrects the calculated light amount to reduce the light amount, when a normal pixel to be processed is adjacent to a detection pixel.

17. The imaging apparatus according to claim 11, wherein the subtraction unit subtracts a black level as well as the light amount from the pixel value of the normal pixel.

18. The imaging apparatus according to claim 11, wherein the subtraction unit includes a selection unit configured to select a detection pixel to be used in subtracting the light amount.

19. The imaging apparatus according to claim 18, wherein the subtraction unit includes a ratio calculation unit configured to calculate a ratio of the light amount included in a pixel value of a normal pixel to be processed using a pixel value of the detection pixel selected by the selection unit.

20. The imaging apparatus according to claim 19, wherein the subtraction unit includes a multiplication unit configured to multiply a pixel value of a normal pixel to be processed by a ratio of an incident light inputted to the normal pixel to be processed from outside, the ratio of the incident light being corresponded to the ratio of the light amount calculated by the ratio calculation unit.

21. The imaging apparatus according to claim 11, wherein the normal pixel and the detection pixel of the image sensor have a vertical spectral structure.

22. The imaging apparatus according to claim 11, wherein the light shielding member is configured to shield an incident light incident upon the detection pixel from outside.